

Opener 09/09/13

If you got 78% on your first test and 86% on your second, what is your average?

$$82\% \quad \frac{78+86}{2} \quad \frac{86+78}{2}$$

How about if you got 92% and 85%?

$$\frac{92+85}{2} = 88.5\%$$

9/09/13

Goals: Apply the midpoint formula.

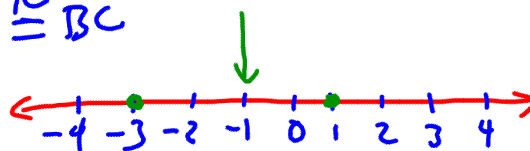
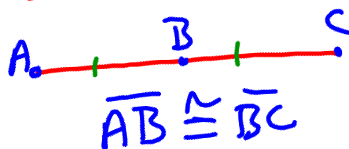
- Warm up questions
- New schedule for the week
- Review Homework (Worksheet 4 - Distance Formula)
- Section 1.3 - Midpoint Formula
- Seating Preferences
- Worksheet for homework (Worksheet 5 - Midpoint Formula)

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Midpoint:

- POINT IN MIDDLE OF A SEGMENT
OR OF 2 OTHER POINTS

- A MIDPOINT DIVIDES A
SEGMENT INTO 2 \cong SEGMENTS



Midpoint
Formula:

$$\begin{pmatrix} x_1, y_1 \\ x_2, y_2 \end{pmatrix} \quad \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

$$\begin{matrix} x & y \\ A(2, 4) \\ B(8, 0) \end{matrix}$$

$$\frac{2+8}{2}, \frac{4+0}{2}$$

$$\frac{10}{2}, \frac{4}{2} \quad (5, 2)$$

$$\begin{matrix} C(2, 4) \\ D(5, 9) \end{matrix}$$

$$\frac{2+5}{2}, \frac{4+9}{2}$$

$$\frac{7}{2}, \frac{13}{2}$$

$$\left(\frac{7}{2}, \frac{13}{2} \right)$$

$$(3.5, 6.5)$$

Section 1.3 Target H Midpoint Formula

Start w/ point
& midpoint:

$$\frac{x_1 + x_2}{2} = x_m$$

$$\frac{y_1 + y_2}{2} = y_m$$

SEGMENT RS
MIDPOINT M

$$2\left(\frac{3 + x_2}{2}\right) = (6) \quad 2$$

$$\begin{array}{r} 3 + x_2 = 12 \\ -3 \quad -3 \\ \hline x_2 = 9 \end{array}$$

$$2\left(\frac{6 + y_2}{2}\right) = (8) \quad 2$$

$$\begin{array}{r} 6 + y_2 = 16 \\ -6 \quad -6 \\ \hline y_2 = 10 \end{array}$$

$x \quad y$
R(3,6),
M(6,8)_n
S(9,10)

	X	Y
R	3	6
M	6	8
S	9	10

$+3 \swarrow$ (from R to M)
 $+3 \swarrow$ (from M to S)
 $+2 \searrow$ (from R to M)
 $+2 \searrow$ (from M to S)

